

# **A CROSS SECTIONAL STUDY TO ASSESS THE UNMET NEED FOR CONTRACEPTION AMONG MARRIED WOMEN IN URBAN SLUMS IN A ZONE OF CHENNAI CITY**

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## CERTIFICATE

This is to certify that the dissertation titled “**A CROSS SECTIONAL STUDY TO ASSESS THE UNMET NEED FOR CONTRACEPTION AMONG MARRIED WOMEN IN URBAN SLUMS IN A ZONE OF CHENNAI CITY**” is a bonafide work carried out by **Dr. Deivasigamani Kuberan** in the Institute of community medicine, Madras Medical College, Chennai, under my guidance and is being submitted to The Tamil Nadu Dr. M.G.R Medical University in partial fulfillment of the requirement for the degree of M.D Branch XV, Community Medicine.

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# **CHAPTER I**

## **INTRODUCTION**

India is the second most populous country in the world next only to that of the Peoples Republic of China. As per the 2001 census, the population of India is about 1027 million. India has about 16 % of the world's population, while it enjoys just 2.4% of the total land area. The density of population was 324 persons per sq km, according to the 2001 census. Even though the growth rate of several other developing countries is even higher than that of India, it must be remembered that the population base of India is very large and therefore even a low growth rate leads to substantial addition to the population in absolute numbers. If the current trend continues, India will overtake China in 2045 and will become the most populous nation in the world. While the global population has increased three fold during the 20<sup>th</sup> century from 2 to 6 billion, the population of India has increased 5 fold from 238 million to 1 billion.<sup>1</sup>

At the beginning of last century Dr. Pyare Kishan Wattal (1916) observed that our country's increasing birth rate is a social danger. He said, "If we want to go to the root of it (Increasing birth rate), we must look at the causes that give rise to this increasing birth rate much more seriously than to the secondary causes that give rise to high death rate".<sup>2</sup>

India was the first country in the world to launch a nation wide Family planning program in 1951. Subsequently during the third Five-Year plan (1961 – 1966) Family planning was declared as the very center of planned development. In April 1976, the country framed its first National Population Policy. The ministry of family planning was renamed as family Welfare in 1977 after ruling out the compulsive and coercive components of the program. The forty second amendment of the constitution made the Population and Family Welfare as a concurrent subject. Subsequently in 1992 the Child Survival and Safe Motherhood program (CSSM) was introduced and later changed to Reproductive and Child Health program (RCH) in 1997 with the ultimate goal of bringing down the Net Reproductive Rate (NRR) to one. In the mean time the method specific targets were removed and target free approach was introduced in 1996 based on the recommendations of the Swaminathan committee formed by the national development council.<sup>1</sup>

Recently the National Population Policy 2000 was introduced, which categorically stated that stabilizing the population is an essential requirement for promoting sustainable development with more equitable distribution. It also stressed that the population growth in India continues to be high on account of the large size of population in the reproductive age group and

high fertility rate due to the unmet need for contraception. The immediate objective of the policy was to address the unmet need of contraception and provide integrated service delivery for basic reproductive and child health care. The middle term objective is to bring the total fertility rate to replacement level by 2010, through vigorous implementation of inter sectoral operational strategies. The long-term objective is to achieve a stable population by 2045 at a level consistent with the requirements of sustainable economic growth and social development. Among the Socio demographic goals of the NPP 2000, those relevant to population control being

1. Addressing the unmet needs for reproductive and child health services, supplies and infrastructure and
2. Achieve universal access to information/ counseling and services for fertility regulation and contraception with a wide basket of choice.<sup>3</sup>

It must be seen that all the recent programs aim at the unmet need for contraception, which is a powerful concept. Women are considered to have an “unmet need” for contraception, if they are sexually active and would prefer to avoid becoming pregnant, but nevertheless using any method of contraception. This concept points to the gap between some women’s reproductive intentions and their contraceptive behavior. It poses a challenge to family planning programs. By responding to the concerns of women with



unmet need, programs can serve more people and serve them better. Programs can respond best if they have a strategy that focuses on women with unmet need as a distinct audience and clientele. To develop such a strategy, we need to understand the various reasons for unmet need, based on qualitative and survey data, to determine the size and composition of this group, to identify the high priority subgroups and deliver information and services to meet the specific needs of each selected subgroup.

## **CHAPTER II**

### **OBJECTIVE**

1. To find out the prevalence of contraceptive usage among the married women of reproductive age group (15-49 years) in the urban slums of Chennai city.
2. To calculate the unmet need for family planning among them.
3. To find out the factors associated with the non usage of contraception.

## CHAPTER III

### JUSTIFICATION

Family planning is not only a key to improve the health of women and children, it is now seen as a human right.

1. Though the fertility rate has decreased to 2.85 from 3.9 (children per women) in 1990, it is still above replacement level.<sup>1</sup>
2. Though 48.2% of eligible couple uses one or other method of family planning, they discontinue them.<sup>4</sup> The reasons for which has to be identified, so that remedial measures taken to stop discontinuance.
3. There is still an unmet need for family planning of 15.8 %, which can be addressed to achieve more success in our effort to control population.<sup>4</sup>
4. Unmet need for contraception can lead to unintended pregnancies, which pose risks for women, their families, and societies.
5. The urban slums have been identified as an underserved population group with a highest unmet need due to various factors, resulting in large family size.
6. In Chennai, the slum population contributes to 41.5 percent of the total population of the city<sup>5</sup>. The total population of Chennai slums is

18,47,747 as on 1<sup>st</sup> April 2005 with an estimated women population of reproductive age group to be around 3 lakh.

7. The newer policy on population and development focuses on meeting, rather than trying to change, people's needs and aspirations. We have set a goal to reduce the unmet need to zero by the year 2015 in the five year review of the ICPD conference.

## **CHAPTER IV**

### **REVIEW OF LITERATURE**

More than 100 million women in less developed countries, or about 17 percent of all married women, would prefer to avoid a pregnancy but are not using any form of family planning.<sup>6</sup> These women are considered to have an “unmet need” for family planning - a concept that has influenced the development of family planning programs for more than 20 years. Over the past decade, rising rates of contraceptive use have reduced unmet need for family planning in most countries. In some countries, however, unmet need remains persistently high (more than one-fifth of married women) or is increasing, indicating that greater efforts are needed to understand and address the causes of unmet need. Numerous studies reveal that a range of obstacles other than physical access to services prevents women from using family planning. Policymakers and program managers can strengthen family planning programs by understanding and using data on unmet need, considering the characteristics of women and couples who have unmet need, and working to remove obstacles that prevent individuals from choosing and using a family planning method.

### ***Why are we concerned?***

Unmet need for contraception can lead to unintended pregnancies, which pose risks for women, their families, and societies. In less developed countries, about one-fourth of pregnancies are unintended - that is, either unwanted or mistimed (wanted later).<sup>7</sup> One particularly harmful consequence of unintended pregnancies is unsafe abortion: An estimated 18 million unsafe abortions take place each year in less developed regions, contributing to high rates of maternal death and injury in these regions.<sup>48</sup> In addition, unwanted births pose risks for children's health and well-being and contribute to rapid population growth in resource-strapped countries. For more than 30 years, surveys in less developed countries have asked women about their childbearing intentions and use of family planning. These surveys have long shown an inconsistency in women's responses: A significant number of women say that they do not want another child but are not using any method of contraception. This gap between women's preferences and actions inspired many governments to initiate or expand family planning programs in order to reduce unintended pregnancies and lower their countries' fertility rates<sup>49</sup>. The term "unmet need" was coined in the late 1970s and has served ever since to gauge family planning needs in less developed countries.

### ***Measurement of unmet need***

Today, the main tool for measuring unmet need is the Demographic and Health Survey (DHS), which has been conducted in 55 countries—often more than once. In the DHS, women ages 15 to 49 are asked whether they would like to have a child (or another child) and if so, how soon, or whether they would prefer not to have any (more) children. To derive a figure for unmet need, analysts link these responses with whether the women are able to become pregnant and whether they are currently using contraception. The calculation of unmet need is complex and can vary slightly depending on which categories of women are included in the definition. Once derived, the figure can be broken down into unmet need for spacing (women who want a child after two or more years) and unmet need for limiting (women who want no more children). Combining the estimate of unmet need with data on current contraceptive use provides a picture of the total potential demand for family planning in a country—that is, what the demand would be if all married women acted on their stated preferences. For family planning programs, the estimate is useful because it helps reveal the size and characteristics of the potential market for contraceptives. For policy purposes, data on unmet need allow analysts to project how much fertility

could decline if the additional need for family planning were met. Critics have pointed out some shortcomings of the data on unmet need: The data often exclude unmarried women, whose level of sexual activity (and therefore risk of pregnancy) vary greatly and are not measured in all countries. Unmarried youth who are sexually active represent a large and growing segment of the population of many countries, but their needs have been measured only in sub-Saharan Africa and a few other countries.<sup>10</sup> A second criticism is that the data exclude women who are using contraceptive methods that are ineffective or personally unsatisfactory. These women may have an unmet need for a different method. In spite of these and other measurement challenges, unmet need has endured as an analytical tool and has served as a benchmark in international policy documents.

The Programme of Action of the 1994 International Conference on Population and Development, a landmark conference, states, “Governmental goals for family planning should be defined in terms of unmet needs for information and services”<sup>8</sup> . In 1999, at the five-year review of the conference, governments set a new benchmark: reducing unmet need by half by 2005 and entirely by 2015, without the use of recruitment targets or



quotas.<sup>9</sup> The benchmarks are consistent with ***a new policy focus on meeting, rather than trying to change, people's needs and aspirations.***

### ***Reasons for Unmet need***

Among the most common reasons for unmet need are inconvenient or unsatisfactory services, lack of information, fears about contraceptive side effects, opposition from husbands, relatives or others, and preference for a male child. Others have been religion, age at marriage, female education and economic status. While many women, who are using contraception have similar concerns, the obstacles to contraceptive use may loom larger for women in the unmet need group, or their commitment to controlling their fertility may be less certain.

### ***Differences among nations***

DHS results in 53 countries reveal that in 16 of 25 countries *outside* Sub-Saharan Africa, unmet need among married women is 15 percent or lower, while only three of 28 sub-Saharan countries have levels that low. Current contraceptive use is also lower in sub-Saharan Africa than elsewhere. Thus, the total demand for family planning—defined as the sum

of unmet need and current contraceptive use— averages 44 percent in sub-Saharan Africa, compared with an average of 70 percent in Asia, the Near East and North Africa, and Latin America and the Caribbean.<sup>10</sup> In sub-Saharan Africa, where 22 countries have levels of unmet need of 20 percent or higher, the need is predominantly for spacing (delaying) births rather than for limiting births. In other regions, there is greater unmet need for limiting births. Generally speaking, contraceptive use rises and women's fertility (average number of children) declines as countries develop. But unmet need does not decline steadily with fertility. In some countries with high fertility, women have low unmet need, because their desire for children is high and therefore little gap exists between their childbearing intentions and contraceptive use. In Chad, for example, women have high fertility (6.6 births on average), low contraceptive use (4 percent), and low unmet need (10 percent). In countries where growing numbers of women want to avoid a pregnancy but contraceptive use is not widespread, unmet need is higher. Cambodia, Haiti, Nepal, Rwanda, Senegal, Togo, Uganda, and Yemen are among the countries where unmet need is 30 percent or higher. At the far end of the spectrum, countries that have widespread use of contraception have both low fertility (close to two births per woman) and low unmet need.

Brazil, Colombia, and Vietnam fall into this category, with only 6 percent to 7 percent of married women having unmet need.

### ***Changes in unmet need over time***

Globally, the proportion of married women with unmet need declined from 19 percent to 17 percent in the 1990s, but the number of women with unmet need has remained nearly constant because of population growth.<sup>6</sup> In the vast majority of the 33 countries that had more than one DHS survey, there was a decline during the 1990s in the percentage of women with unmet need, thanks to greater use of family planning. On the whole, these trends are positive: They show women's increasing ability to achieve their childbearing goals.

Nevertheless, some countries have experienced only small declines in unmet need, and a few, such as Mali, Senegal, and Uganda, have seen an increase. These increases have occurred mainly because fertility preferences have changed—that is, more women want to postpone or limit childbearing—while increases in contraceptive use have lagged behind.

In most countries, declines in unmet need in the 1990s occurred among women at all levels of education; in the past, more educated women were usually the first to pursue family planning. Nevertheless, the differences between more educated and less educated women persist: The most educated women have the lowest levels of unmet need, presumably because they are most able to act on their intentions.

### ***Are All Women with Unmet Need Potential Users of Contraceptives?***

Experts predict that some, but not all, women with unmet need are likely to use contraceptives in the future, and researchers have been able to shed some light on which women are more likely to adopt family planning than others. While survey data cannot directly reveal the strength of a woman's preferences or of the obstacles she faces, analysts can infer her likelihood of using contraception by looking at whether she has used contraception in the past and whether she intends to use it in the future.

These refinements allow analysts to group women with unmet need into four categories:<sup>11</sup>

1. Women who have never used contraception and do not intend to use it in the future;
2. Women who have never used contraception but do intend to use it in the future;

3. Women who have used contraception in the past but do not intend to do so in the future; and
4. Women who have used contraception in the past and also intend to use it in the future.

For family planning programs, these women can be viewed along a continuum, with those in the first category being the least likely to use services and therefore hardest to reach, and those in the fourth category being most likely to use contraception and easiest to serve. The proportion of women with unmet need who fall in the first (least likely to use) category varies dramatically among countries. The countries with the highest proportions of this type of unmet need—50 percent or more of women having unmet need—include Chad, Egypt, Eritrea, Guatemala, India, Mozambique, Nigeria, Pakistan, and Yemen. The women in this category are likely to live in rural areas and are the least educated of the four categories; they are also the least likely to have been exposed to family planning messages on radio or television. Their reasons for not using contraception generally include opposition to family planning, lack of knowledge, and fear of side effects. At the other end of the continuum, women who have used contraception in the past and intend to use it in the future are the most likely future users of contraception. Some of these

women may have recently been pregnant and may not yet have resumed using contraception, and some may have stopped using contraception because of side effects or other reasons. The women in this category are the most educated and tend to live in cities. Their ideal number of children is the lowest of the four groups, and they are likely to have been exposed to media messages about family planning. Many women outside sub-Saharan Africa fall into this category. Women who have not used contraception in the past but intend to use it in the future are somewhat motivated but may face a whole range of obstacles (mentioned earlier) that need to be overcome.

About one-third of women with unmet need in sub-Saharan Africa fall into this group. Conversely, women who have used contraceptives in the past but do not intend to do so in the future make up the smallest category and tend to be older than the other groups. They may have health concerns related to contraception or be uncertain about their likelihood of becoming pregnant.

### ***Indian scenario***

Contraceptive use has been increasing in India along with the unmet need. Nationally 48 % of currently married women were using some method of contraception in 1998-1999. Contraceptive prevalence varied widely among states, from less than 30 % in Bihar, Meghalaya and Uttar Pradesh to more than 60 % in Delhi, Haryana, Himachal Pradesh, Kerala, Punjab,

Maharashtra and west Bengal. Current contraceptive usage has increased by 18 % nationally from 1990 to 1998 as indicated by NFHS.

In spite of the cafeteria approach adopted, it is clear that until recently the programme remained skewed towards promoting non – reversible methods, particularly female sterilization. Nationally, sterilization accounts for 84 % of current contraceptive prevalence. This predominance of female sterilization is observed in almost all states; more than 90 % of modern contraceptive method users are sterilized in all the southern states and Bihar, while it is 97 % in Andhra. Only in Delhi and Punjab fewer than 60% are sterilized.

Other methods of spacing (Oral contraceptive pills, intra uterine device and condoms) account for 14 % of current contraceptive use.

Direct evidence on the use of male methods is scarce as men have been excluded from most of the national surveys. Nationally, data based on the responses of currently married women show that one in ten currently married ‘couples’ were using male/ couple-dependent contraceptive methods (condoms, vasectomy, withdrawal and periodic abstinence) in 1998-1999, which translates into 21% of the total current contraceptive prevalence.<sup>4</sup>

As contraceptive use increases and becomes a more established behavior, prevalence is no longer a sufficient marker of programme success.<sup>12</sup>

Contraceptive continuation may become more important than acceptance in increasing contraceptive prevalence.<sup>13</sup>

Nationally, data from NFHS-2 show that one in ten currently married women who have ever used a contraceptive method (which translates into 29% of ever-users of reversible methods) had discontinued its use at the time of the survey. The data also show that younger women (15–24-year-olds) were more likely to discontinue using contraceptives compared to older women, reasons being desire for child or side effects.

### ***Unmet need for contraception***

Despite improved availability and access to contraceptive services, a substantial proportion of pregnancies (21% of all pregnancies that resulted in live births nationally) were unplanned (mistimed or unwanted).<sup>4</sup> It is estimated that if all unwanted births could be eliminated, the total fertility rate would drop to the replacement level of fertility. Moreover, several studies report that the desire to limit family size and to space the next birth are the main reasons mentioned by the majority of abortion seekers,<sup>14</sup> clearly highlighting that there is a substantial unmet need for contraception among women in India.



The NFHS-2 reports that 16% of currently married women have an unmet contraceptive need, which translates into one fourth of women who wish to space or limit births.<sup>4</sup> Based on the current population of 1,027 million, this implies that approximately 40 million married women have an unmet need.<sup>15</sup>

While the needs of the vast majority of women who wish to stop childbearing are being satisfied, the needs of women who wish to delay or space childbearing remain largely unsatisfied. For example, it is estimated that the needs of 86% of women who wish to stop childbearing are addressed by the existing services, compared to the needs of 30% of women who wish to delay their next pregnancy.

The unmet need for spacing birth is the same as the unmet need for limiting births (8 %). If all the women who say they want to space or limit their birth were to use family planning, the contraceptive prevalence rate would increase from 48 % to 64% of currently married women, implying that 25 % of total family planning need is not being met. Comparison with NFHS –1 indicates that the proportion of women with unmet need for family planning declined from 20 to 16 % during the six and one half years between the surveys.

Unmet need is highest (27 %) among women below age 20: the unmet need in this age group is almost entirely for spacing rather than for limiting. Unmet need is also relatively high for women aged 20 –24 years (24 %), with 75 % of the need being for spacing. Among women aged 25 –29 years, 19 % have an unmet need. Unmet need for family planning is higher in rural areas than in urban areas. Unmet need for family planning varies by women's education, but only within a narrow range of 14 – 17%. Hindu and Christian have a lower unmet need for family planning (15%) than Muslim women (22 %), but a higher unmet need than other women from other religious groups (8 – 13 %).

Also the unmet need for family planning is much higher for women with one child and for women with 6 or more living children. There have been interstate variations also ranging from 7 % in Punjab to 25 % in Uttar Pradesh and Bihar, to 36 % in the smaller northeastern state of Meghalaya.

In Tamil Nadu the contraceptive rate is 58.2 %, same as that of our national average. Among the reason for stopping use of contraceptives were that they wanted to have a child or there were health problems related to method. In rural areas the other reason was that their husband was away.

## ***BARRIERS TO MEETING CONTRACEPTIVE NEEDS***

### ***Limited knowledge***

Awareness of reversible (modern or natural) methods is relatively limited among both women and men. Nationally, for example, only 71% of currently married women were aware of condoms.<sup>4</sup> In some major states including Andhra Pradesh, Karnataka, Madhya Pradesh and Orissa, fewer than three in five currently married women were aware of condoms. Awareness of specific reversible methods that are suitable for young women was even more limited among young women compared to other women. For example, only three fifths of married adolescents were aware of condoms, compared to nearly three fourths of women between 20-34 years.<sup>16</sup> Small-scale studies show that a substantial proportion of unmarried boys and girls also lack contraceptive knowledge.<sup>17-18</sup>

Inadequate knowledge of contraceptive methods, and incomplete or erroneous information about where to obtain methods and how to use them are the main reasons for not accepting family planning.<sup>19-20</sup> Studies assessing correct, adequate and timely knowledge suggest that only a small proportion have complete knowledge of various contraceptive methods.<sup>21</sup>

### ***Limited male involvement***

The critical role of the husband has been noted in several studies on decision-making related to the use of contraception, especially during the early years of marriage.<sup>22-25</sup> Most couples do not discuss with each other when to have their first child, birth spacing or contraception.<sup>4, 25</sup> Nationally, for example, fewer than one in five currently married women reported discussing family planning with their husbands.<sup>4</sup> Studies also show that most men approve of contraception only after having a second or third child,<sup>26</sup> and that husbands' approval of a particular method is critical.<sup>27</sup>

Regarding discussion with family members there were differences between women aged 15 - 34 (27 –29 %) and women aged 35 –49 (17 %) and also there were differences between urban (29 %) and rural (23 %) on the same.

### ***Limited informed choice***

The public sector essentially provides five contraceptive methods – two forms of tubectomy (laparoscopy and minilap), vasectomy (including 'no-scalpel' vasectomy), IUDs (Copper T200), oral pills (combined) and condoms. Efforts to broaden the basket of choices have been under way, including clinical trials to assess the safety and efficacy of available methods such as estrogen-progestogen combination injectables, vaginal rings and

long-acting IUDs, and the development of new methods of male and female fertility regulation.<sup>28</sup> As part of expanding contraceptive choice, the government has introduced emergency contraceptive pills in the Reproductive and Child Health programme.<sup>29</sup>

Not only is access to a wider choice of methods limited, but also providers also often do not assist women and men to exercise their right to contraceptive choice by offering them complete and accurate information on the variety of methods available. Nationally, for example, only 15% of users of modern contraceptive methods who were motivated by a health worker from the public or private sector were informed of at least one alternative method.<sup>4</sup>

***Little perceived risk of Pregnancy.***

When a woman believes that she is unlikely to become pregnant, she is unlikely to be interested in contraception. Women with unmet need for limiting births are much more likely than potential spacers to think that they face little risk of pregnancy- probably because most women with unmet need for limiting are older. Mostly the perceived risk is less due to rare sex or nearing menopause or postpartum/breastfeeding.

### ***Limited access and availability of services***

There has been considerable expansion and strengthening of the health care infrastructure. Access to contraceptive methods has increased significantly, and only a negligible minority of women (4% as per NFHS-2 data) <sup>4</sup> perceive availability, accessibility or cost as major impediments to using contraception. Yet, in practice, access to and availability of services are significant issues of concern.

Where workers are available, they are generally poorly trained and have little knowledge of the methods they are to provide.<sup>30</sup> A facility survey observes that only 16% of primary health centres have physicians trained in conducting sterilization, and only two thirds have at least one paramedical staff trained in IUD insertion.<sup>31</sup> While female health workers in many studies reported that they had received training in IUD insertion, the majority did not feel confident about actually inserting an IUD in field-settings or showed little awareness of the precautions to be taken.

According to a study done in the urban slums of Delhi by A. Puri, S. Garg, M.Mehra of Dept of PSM, Maulana Azad Medical college, New Delhi, there was an unmet need of 49.8 %, among which the highest need for spacing was found in women of 15 –19 years and the highest unmet need for limiting family size was present in 40 – 45 years aged women. Contraceptive use

pattern was highest for age 35- 39 years followed by 30 – 34 years, where predominant mode used was tubectomy. In majority of women opposition from husband/ families (19.8%) was cited as the main reason for non-acceptance of any contraception. In 18.2 % of mothers health concern about contraceptives and side effects were responsible for unmet need. Difficulty with access to and quality of family planning services and lack of information was reported by 8.2 % and 5.8 % of mothers as reason for non-use. 3.3 % of mothers said they wanted to complete family and then adopt sterilization <sup>32</sup>.

According to the information from the department of Community health, World health organization, Regional office for South east Asia, New Delhi, 21 % of all pregnancies that result in live birth are mistimed or unplanned. While the family planning needs of the majority (86 %) of women whom wish to stop child bearing are being satisfied, the need of women who wish to delay or space child bearing remain largely unsatisfactory (only 30 % of these women have their needs met) <sup>33</sup>.

According to a study on the fertility patterns and family planning acceptance among slum dwellers in Kanpur by Upadhyay, Jayantha, Arun Kumar Sharma, ideal family size was significantly related to only caste and income and desired family size only to the husbands literacy. 28 % of all

respondents knew as many as four methods with condoms as the most preferred choice <sup>34</sup>.

In a study on the determinants of unmet need for family planning in squatter settlements in Karachi, Pakistan, difference between the women's perception with that of her mother-in-law's goals for her fertility, lack of female autonomy and lack of communication with spouse on sexual matters influence the existence of unmet need for family planning among them <sup>35</sup>.

It is found that 9.7 % currently married women in Kuwait had an unmet need for contraception, as per the study on unmet need for contraception in Kuwait by Shah M A, Shah N M, Chowdhury R I, Menon I. They also found out that the unmet need group comprised of relatively older women with a significantly higher level of parity and ones where husband or wife disapproved of contraception, and believed that Islam forbids family planning, compared to current users (30 % and 15 % respectively). 22% were not using a method because of health concerns, while two thirds believed that they had a low risk of pregnancy due to infrequent sexual activity or sub fecundity<sup>36</sup>.

In another study in Nigeria on 15 – 24 year women, it was found that only 11.1 % of the women ever had contraceptives although 63.2 % of them had sexual intercourse. Contraceptive usage was significantly higher among the



single sexually active women (38.5%) than among the married women (7.7%). Only 7.3 % were currently using a contraceptive method <sup>37</sup>.

There exists a large unmet need for temporary methods of contraception in urban areas of China as indicated by high abortion rates ranging between 11 – 55 % as revealed by a systematic review on unintended pregnancy and induced abortion among married women in China <sup>38</sup>.

Survey among women aged 19 – 59 years in Australia on contraceptive practices 70.8 % were using a method of contraception, among whom, 95 % were apparently at risk of pregnancy. The most used methods were oral contraceptives (33.6 % of users), tubal ligation (22.5 %), Condom (21.4 %) and vasectomy of partner (19.3%)<sup>39</sup>.

In another study conducted in the urban slum of Delhi by Dr. Madhumita Mukherjee et al, it is observed that the contraceptive use was 51.3%. Use of spacing methods at one child was 9.4 % of temporary method users. Reasons for using temporary method of contraception, even after completing family size was the welfare of the children till 5 years. Current use was higher among working group. Unmet need for contraception was high (21.15 %). Desire for more children was the main reason for non usage, next to fear of complications <sup>40</sup>.

Unmet need often resulted from lack of contraceptive choices; sterilization was the only method available in a study in Tamil Nadu, India <sup>41</sup>. Also, women said that their husbands, often fearing health risks, discouraged from using contraception altogether. Most wives felt that sterilization entailed too many risks, while most husbands are opposed to sterilization <sup>42</sup>.

## CHAPTER V

# METHODOLOGY

The study was a Community based Cross Sectional Study

### ***Study Area***

This study was done within the slums of Zone VIII (Kodambakkam) of Chennai Corporation.

### ***Study Period***

The study period right from planning to report preparation was during June 2005 to February 2006. However data collection was done during December 2005 – January 2006.

### ***Study population***

Currently married women of reproductive age group (15-49 years of age) living in slums of Chennai city.

### ***Sample Size***

Though many studies have been carried out in various settings at many places, resulting in various rates of unmet need, the rate of prevalence of unmet need for contraception as 15.8% as per the NFHS –2 (1998-99)<sup>4</sup> is considered for calculation of sample size at 95% CI. (Z= 1.96) and limit of accuracy kept at 20% of 15.8.

$$N = \frac{Z^2 \times pq}{d^2}$$

$$N = \frac{(1.96)^2 \times 15.8 \times 84.2}{3.16^2} = 512$$

This has been rounded off to 520.

### ***Sampling procedure***

Sampling is done by multi stage sampling method. Initially Zone VIII of the ten zones within the limits of Chennai Corporation was randomly selected by lottery method. Zone VIII has sixteen divisions (Annexure IB). At the first stage three divisions (Thiyagaraya Nagar, Alwarpet (south) and Alwarpet (North)) from this zone were selected randomly and in the second stage four slums from each selected division were selected randomly by lottery method (Annexure IC). The centre of each selected urban slum is reached from where a direction and a house randomly chosen from which respondents were searched till adequate number of 44 respondents per slum (to reach a total of 520) is achieved.

### ***Development of interview schedule.***

An interview schedule was prepared based on the model survey questionnaire recommended by the WHO<sup>43</sup>. The questionnaire was pretested among 30 married women of Basin bridge slum in Zone II. Based on the

observations made during the pre testing, the questionnaire was modified. The developed schedule has four parts comprising of the background characteristics of the respondent, marital status and fertility, Knowledge and attitude to contraception and use of contraceptives and perceived availability and accessibility of contraceptives (Annexure II).

### ***Data Collection***

Data collection was done by house-to-house visit. The investigator along with a woman volunteer approached at least 15 respondents everyday. First it was enquired whether there were any married women in the house. If there were no such member present at that time, the interviewer passed on to the next house till a house with married women was located. Brief introduction was given to the respondent. After obtaining their informed consent orally, relevant information was obtained from the respondent using the pretested structured questionnaire. Questions were asked in the local language and the questionnaire filled on the spot. At the end, any misconception or queries were clarified and the respondent was thanked for sparing the time.

### ***Data analysis***

Data was coded and analyzed as percentages and Chi-square using statistical software SPSS 10.

## DEFINITIONS

***Contraception:*** Contra + Ception Contra in Latin for against and conception is for the act of conceiving or becoming pregnant.

Contraception is the use of any method or system that allows sexual intercourse and yet prevents conception.

***Family planning:*** A way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitudes and responsible decisions by individuals and couples, in order to promote the health and welfare of the family group and thus contribute effectively to the social development of a country.

***Unmet Need:*** In its definition of unmet need, the DHS program includes women who are currently married who say they prefer not to have another child either within the next two years or ever again, as well as women who are pregnant who did not intend to become pregnant at the time they conceived and were not using a contraceptive method. The definition excludes women who declare that they are infecund, have had a hysterectomy, or are in menopause.

***Fecundity***: The power or quality of being able to produce offspring.

***Contraceptive prevalence rate***: Percentage of eligible couple effectively protected against childbirth by one or other approved methods of family planning.

***Eligible couple***: currently married couple wherein the wife is in the reproductive age (15 and 45).

***Ever User***: Married women who had ever used any method of contraception (modern or traditional) to delay or avoid pregnancy.

***Never User***: Married women who had never used any method of contraception (modern or traditional) to delay or avoid pregnancy.

***Current User***: Married women who are currently using any method of contraception (modern or traditional) to delay or avoid pregnancy.

***Slum:*** In 1920, Chicago School of Sociologists have defined the word **slum** as “The common denominator of the slum is its submerged aspect and its detachment from the city as a whole, The slum is a break area of segregated society; an area of extreme poverty, tenements, ramshackle buildings, of eviction and evaded rents; an area of working mothers and high rates of birth, infant mortality, illegitimacy and death, an area of pawn shops and second hand stores.”

Oxford Dictionary defines **slum** as “ a street, alley, court, etc., situated in a crowded district of a town or city and inhabited by people of low income classes or by very poor; or a number of these streets and courts forming a thickly populated neighborhood of a squalid and wretched character”.

## CHAPTER VI

### RESULTS AND DISCUSSION

The study was conducted in the slums of Alwarpet (South), Alwarpet (North) and Thiyagaraya Nagar of Zone VIII (Kodambakkam) of Chennai Corporation area, selected randomly by lottery method. 520 married women participated in the study.

#### ***6.1.1 Age of respondents***

Age of the respondent at the time of study ranged between 18 and 46 years.

The mean age was 27 years. (Table 1).

**Table 1. *Distribution of age of respondents***

<b>Age Group (in Years)</b>	<b>Frequency (N=520)</b>	<b>Percentage</b>
15 – 19	9	1.7
20 – 24	158	30.4
25 – 29	230	44.2
30 – 34	83	16
35 – 39	33	6.3
40 – 44	2	0.4
45 – 49	5	1

#### ***6.1.2 Age at Marriage***

Age of the respondent at the time of marriage ranged between 13 – 27 years, with the median age at marriage being 19 years. There were 4 women married at 13 years, 7 at 14 years, 14 at 15 years and 33 at 16 years of age.

The duration of their marriage ranged from a minimum of 6 years to



maximum 28 years. Among the study group 27.5 % were less than 18 years and 23.5% only were more than 21 years at the time of their marriage as given in table 2.

**Table 2. *Frequency of age at marriage***

<b>Age at marriage</b>	<b>Frequency (N=520)</b>	<b>Percentage</b>
< 18 years	143	27.5
18 – 21 years	255	49
> 21 years	122	23.5

### **6.1.3 Education**

Among the study group, majority have studied either primary or high school with 74 % contributing to both. (Table 3.)

**Table 3. *Education Status of respondents***

<b>Education</b>	<b>Frequency (N=520)</b>	<b>Percentage</b>
Primary	191	36.7
High School	194	37.3
Secondary School	63	12.1
Graduate	14	2.7
Illiterate	58	11.2

### **6.1.4 Reproductive Status**

At the time of study only 7.7% of the respondents were pregnant. 35.4% had two children and 55.2 % had more than two children (Table 4).

**Table 4. *Frequency of number of children in family.***

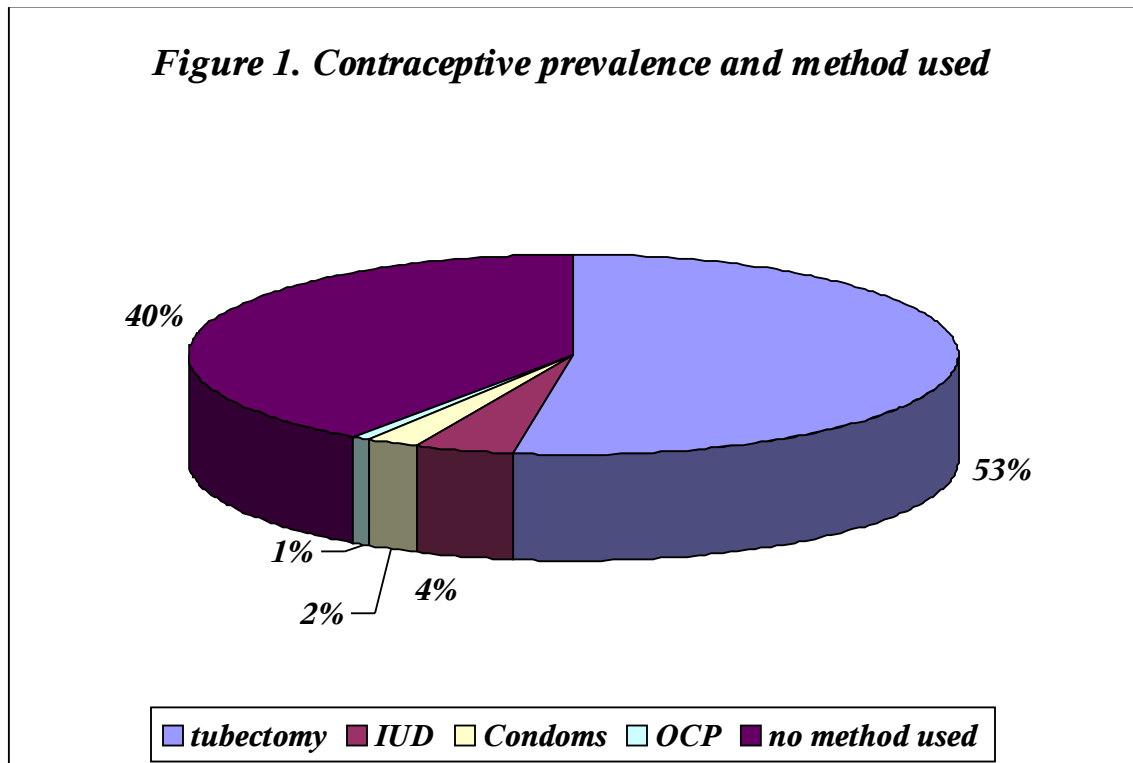
<b>Number of children in the Family</b>	<b>Frequency (N=520)</b>	<b>Percentage</b>
Nil	10	1.9
1	39	7.5
2	184	35.4
2+	287	55.2

### ***6.2 Prevalence of Contraceptive use***

Contraceptive prevalence is the percentage of currently married women of reproductive age who are effectively protected against childbirth by one or other approved methods of family planning.

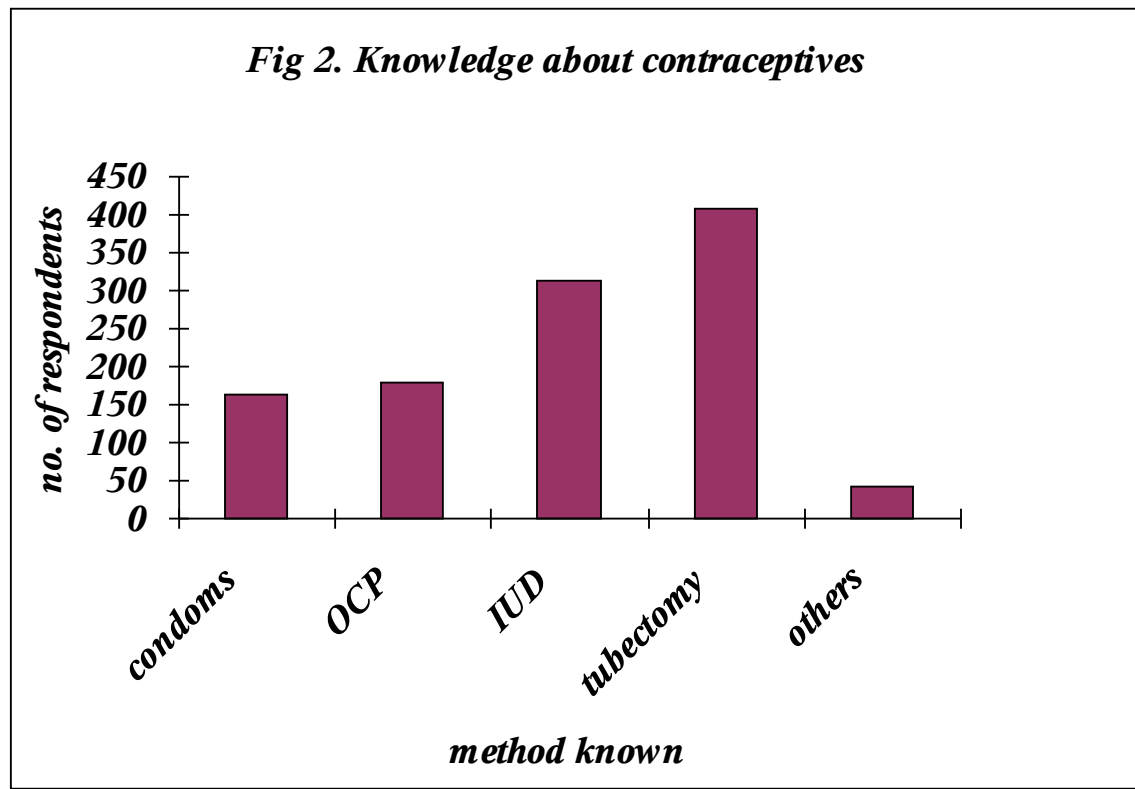
Among the study population of 520, prevalence of contraceptive use was found to the extent of **59.7 %**. The percentage of women who used any temporary method of contraceptive in the past was 6.3% and there were 34% never users. Induced abortion as a routine method of contraception is undesirable, but it is practiced in certain circumstances under the provision of MTP act 1972. In this study, it was found that 13.7% of women had induced abortion at least once as a method of contraception. Among the study population, the permanent method of contraception was found among 273 respondents while only 37 adopted a temporary method. Tubectomy was highest with 88% of contraceptive users (273) and vasectomy was found in none. Among the temporary method users 22 were using Intra Uterine

Devices (IUD), 11 using condoms and 4 using Oral Contraceptive Pills (OCP). (Fig.1)



### 6.3 Knowledge about contraceptives

Knowledge about contraceptive was seen in 83.46 % (434) of the respondents, while only 16.54% (86) were unaware of any method. Among the respondents many stated to have known more than one method. Tubectomy was known among 409 respondents, while 162 knew condom. (Fig.2)



**Table 5. Showing Contraceptive usage and knowledge status**

Knowledge	Contraceptive user	Contraceptive non user	Total
Present	301	133	434
Absent	9	77	86
Total	310	210	520

$\chi^2=103.93$ ,  $p=0.0000$

#### ***6.4 Reasons for stopping***

Among the 33 respondents who had reported to have used contraceptives and have now stopped, the reasons were to become pregnant in 19 among them, 13 for health reasons and 1 due to non-approval of husband.

#### ***6.5 Reasons for not using a contraceptive (Never users)***

Among the 177 respondents who were never users, the reasons attributed to non-usage are as follows.

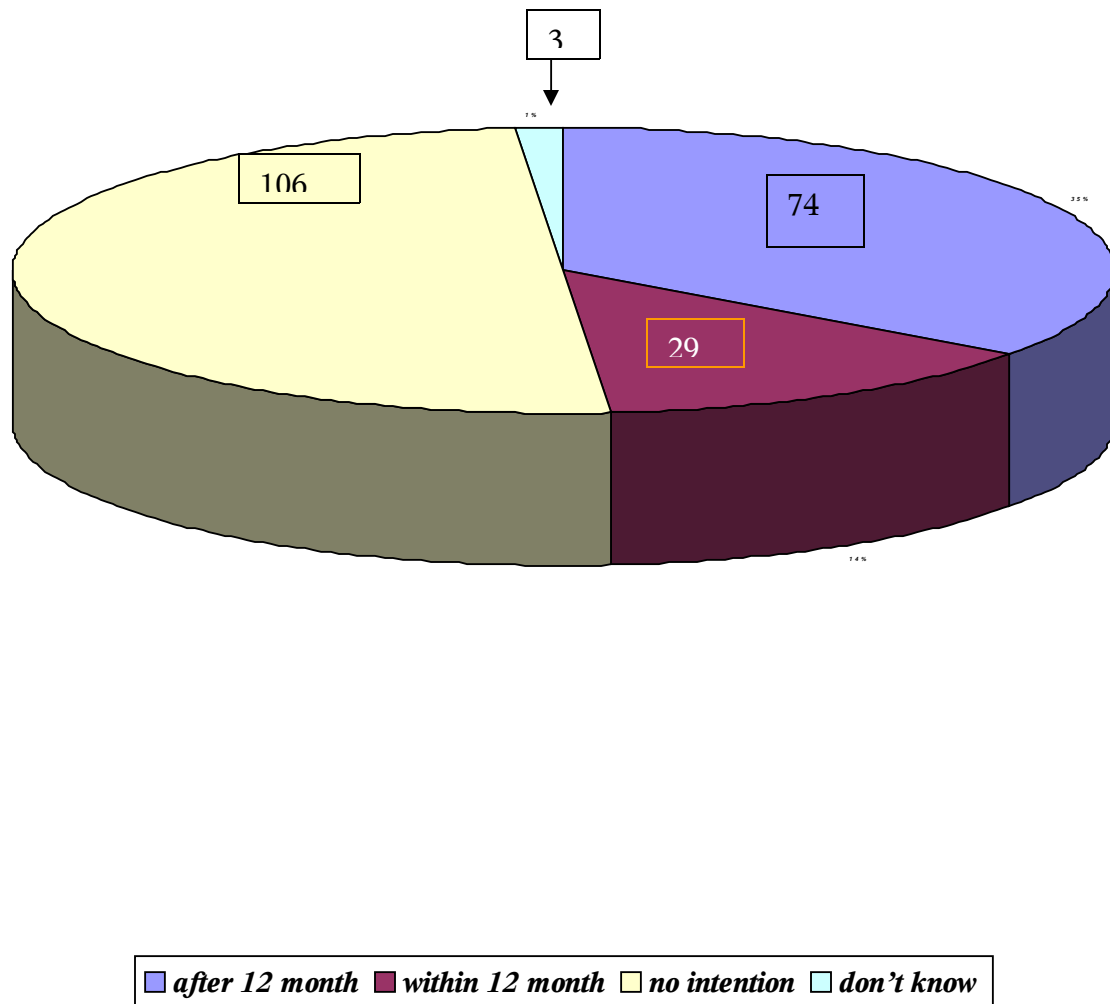
**Table 6. *Distribution of reasons among never users***

<b>Reason</b>	<b>Respondents (N=177)</b>
Breast feeding/ postpartum	23
Want to become pregnant	59
Lack of knowledge	55
Religious belief	4
Opposition from partner	13
Fear of side effect	21
Don't know	2

#### ***6.6 Intention to use in future***

Among the non users (210), only 48 %( 101) intended to use a contraceptive in future among which only 29 responded to use within 12 months.

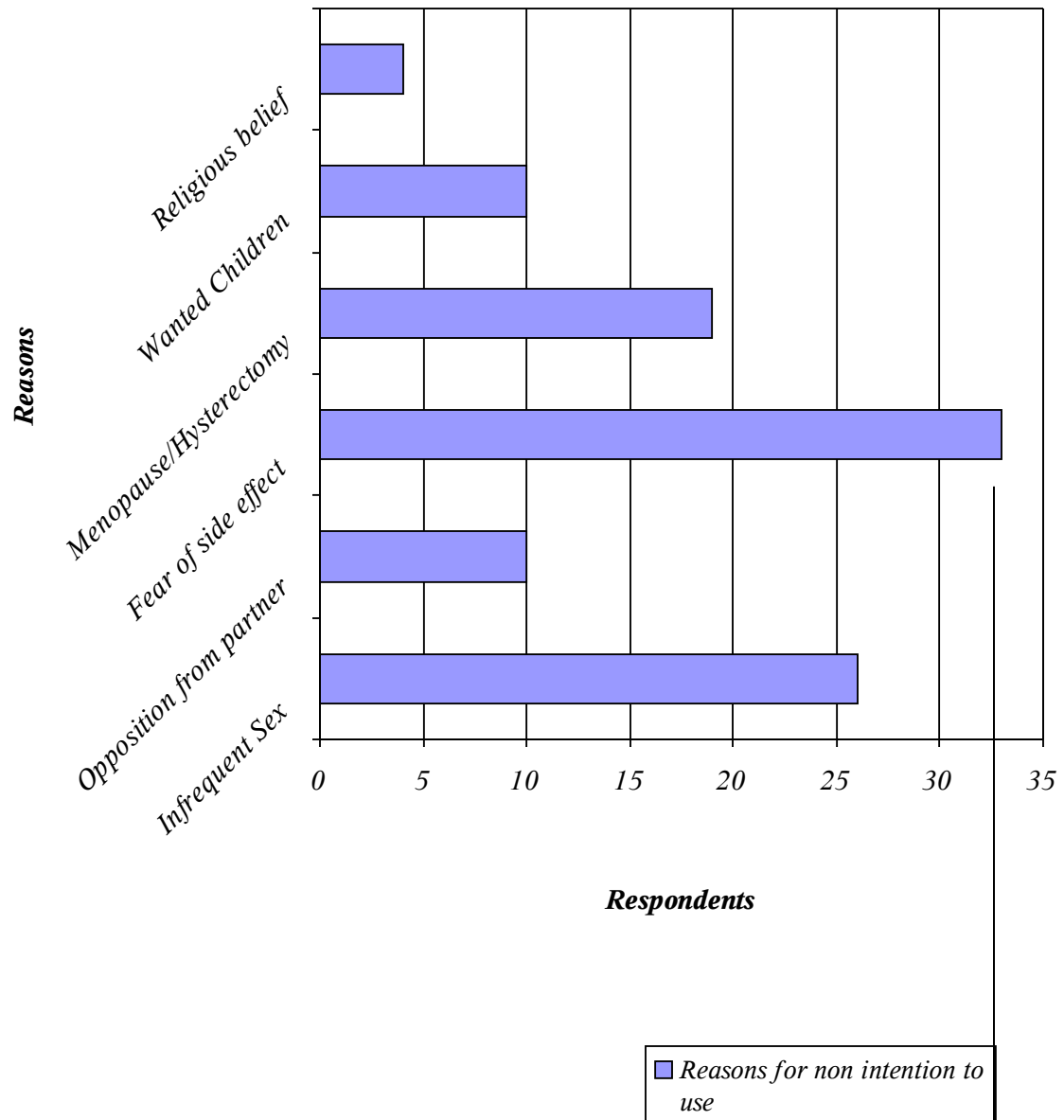
**Figure 3. Intention to use contraceptive among non users**



### **6.7 Reasons for not using a contraceptive method at any time in future.**

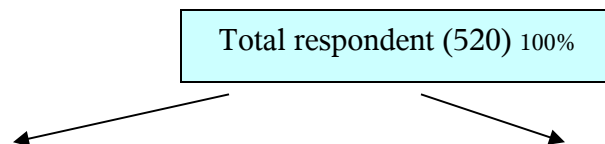
Among the reasons for no intention to use a contraceptive are as follows

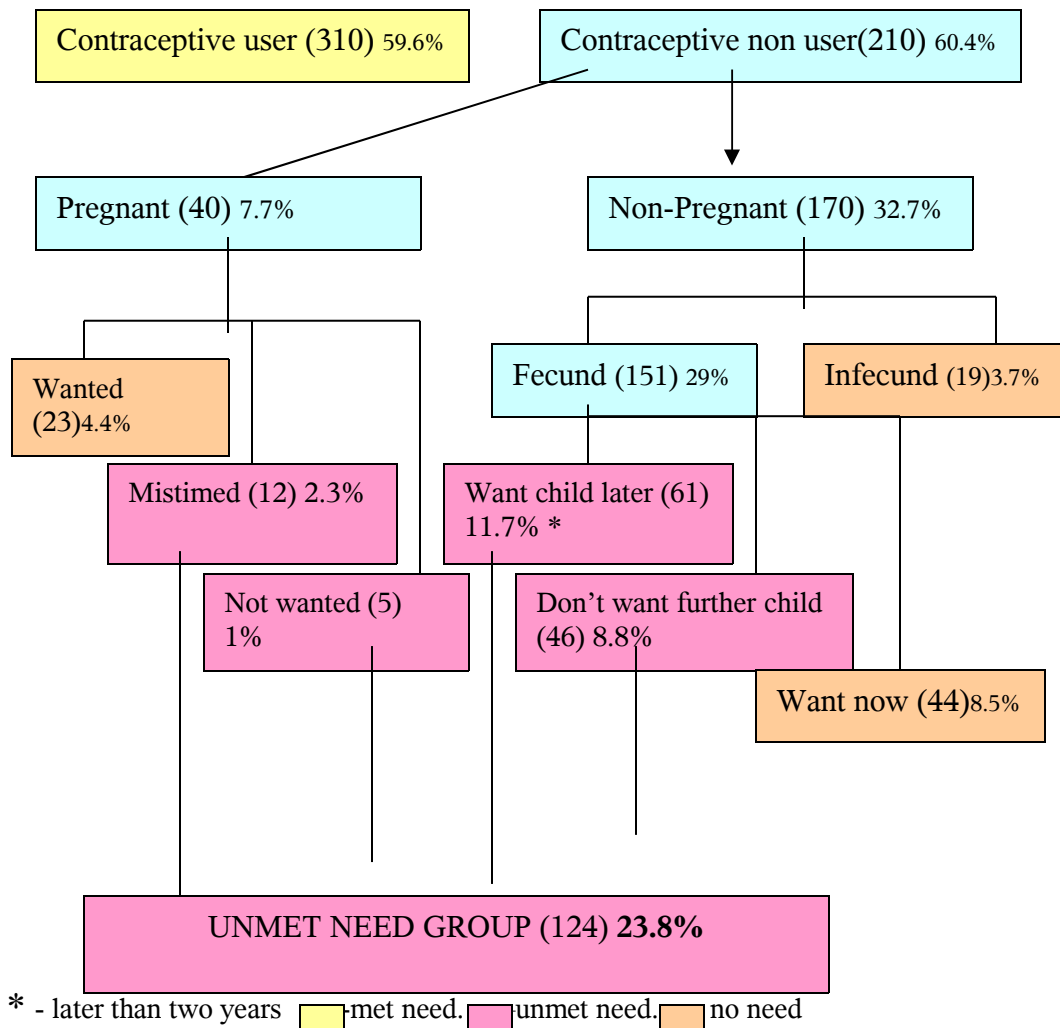
**Figure 4. Distribution of reasons for non intention to use**



### 6.8.1 Unmet need for contraception

Figure 5. Schematic derivation of unmet need

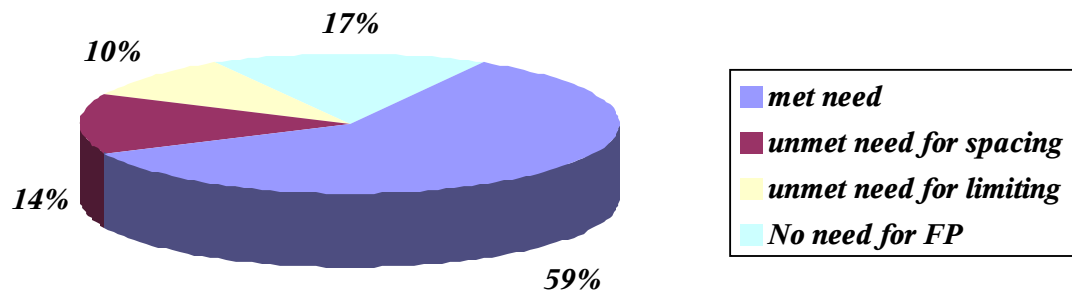




The prevalence of unmet need for contraception was found to be **23.8 %** (124/520) among the study group as derived in figure 5.



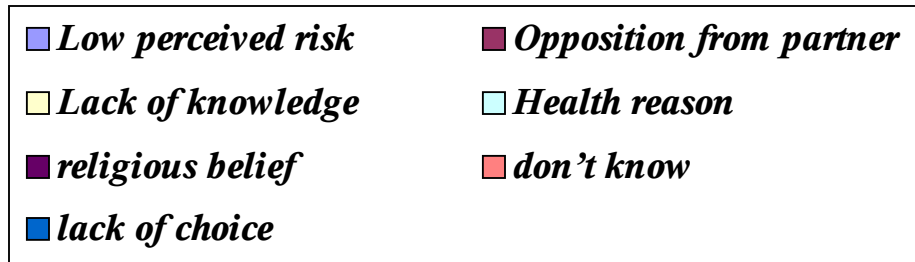
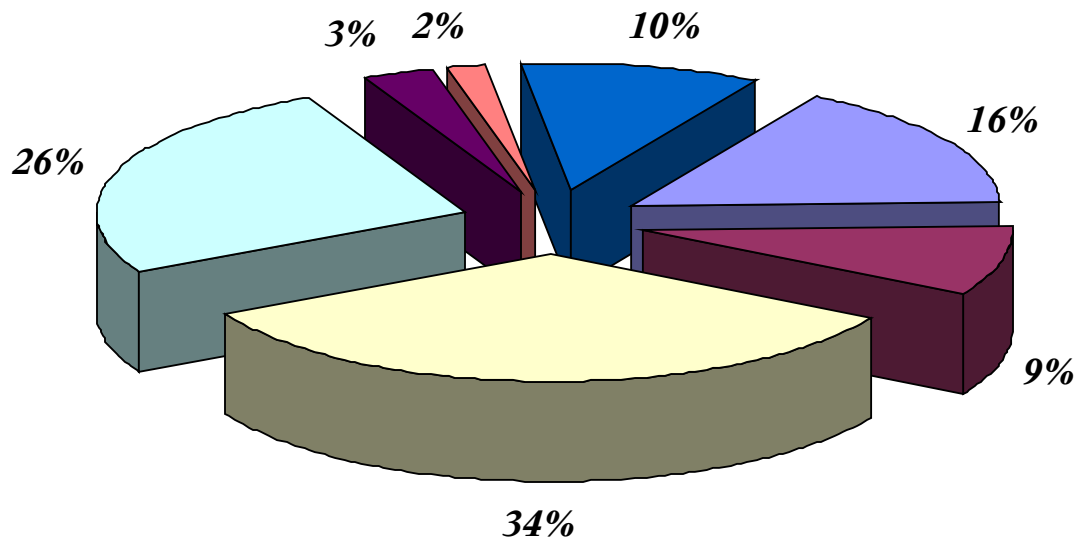
***Figure 6. Different needs of respondents as percentage***



### ***6.8.2 Reason for Unmet need***

Among the reasons stated for unmet need lack of knowledge and fear of side effect were seen in more cases. Lack of knowledge and Health reason/ fear of side effects were the main reasons for unmet need in 42 and 32 respondents respectively. Low perceived risk was seen in 20 women and 11 had opposition from partner. Religious reasons were found in 4 respondents. It is observed that none of the respondents stated any difficulty in access to Family Planning methods indicating a well-located health system in this part of Chennai city.

***Figure 7. Reasons for unmet need***



### ***6.8.3 Age and Unmet Need***

There exists a statistical significant difference between the met and unmet need groups with age (Table 7)

**Table 7. *Distribution of unmet need among different age group***

<b>Age Group (in Years)</b>	<b>Met need (N=310)</b>	<b>Unmet need (N=124)</b>	<b>Total</b>
15 – 19	2	3	5
20 – 24	64	57	121
25 – 29	168	49	217
30 – 34	60	13	73
35 – 39	16	2	18
40 – 44	0	0	0
45 - 49	0	0	0

$$\chi^2 = 33.44, p = 0.0000 \text{ d.f}=4$$

### ***6.8.4 Age at marriage and unmet need***

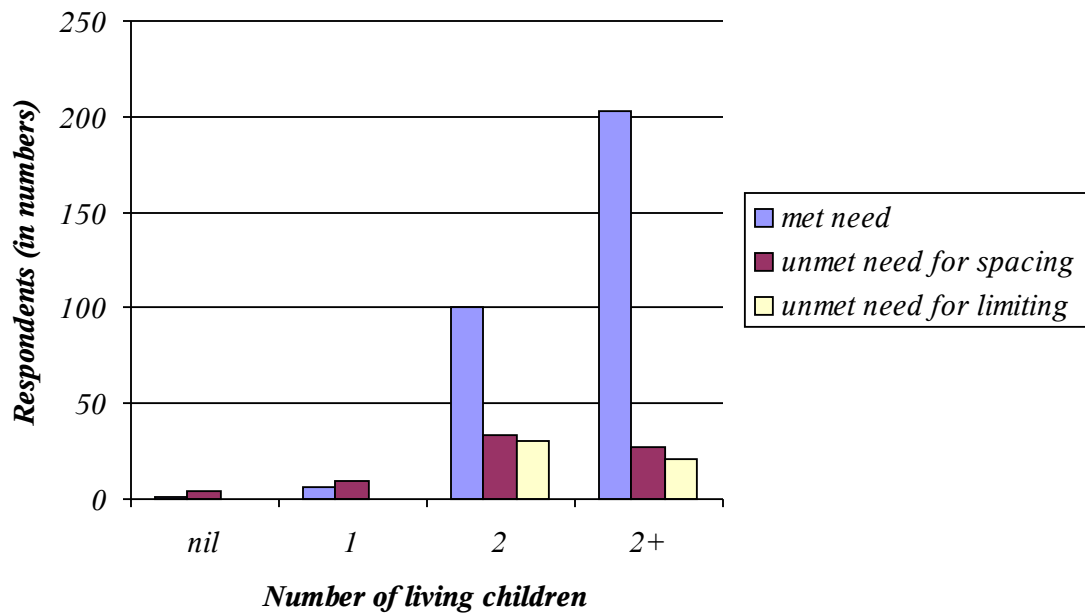
**Table 8. *Unmet need among different age at marriage***

<b>Age at marriage group</b>	<b>Met need(310)</b>	<b>Unmet need (N=124)</b>
Less than 18 years	85	35
18-21 years	150	56
Above 21 years	75	33

$$\chi^2 = 0.42 \text{ p} = 0.802, \text{ df}=2$$

### ***6.8.5 Number of living children in the family and unmet need***

**Figure 8. *Unmet need for spacing and limiting with living children***



**Table 9. Needs among families with different number of children**

Number of children in the Family	Met need	Unmet need
Nil	1	4
1	6	9
2	100	63
2+	203	48

$\chi^2 = 32.83$ ,  $p = 0.0000$ ,  $df = 3$ .

It is observed from Figure 8 that the proportion of contraceptive usage is high among the families with more than two children

#### ***6.8.6 Presence of male child in the family and unmet need***

**Table 10. Needs among families with male child**

<b>Presence of male child in family</b>	<b>Met need</b>	<b>Unmet need</b>
<b>Yes</b>	196	63
<b>No</b>	114	61

$$\chi^2 = 5.68, p = 0.0171, df = 1$$

#### ***6.8.7 Education and Unmet need***

**Table 11. Needs among different school category**

<b>Education category</b>	<b>Met need</b>	<b>Unmet need</b>
<b>Illiterate</b>	35	5
<b>Primary</b>	121	43
<b>High school</b>	109	55
<b>Secondary</b>	37	16
<b>College</b>	8	5

$$\chi^2 = 8.18, p = 0.08, df = 4$$

#### ***6.9 Perceived Availability***

Among the 520 respondents, 81.3 %(423) knew where to get a contraceptive. Among them 384 said they could get in from government health post, 26 from private doctors and hospitals and 13 from pharmacy.

First preferred choice of public health post was seen in 382 of them. Among them 81% felt their preferred place was convenient.

**Table 12. *Perceived availability among different need groups***

<b>Perceived availability</b>	<b>Met need</b>	<b>Unmet need</b>
<b>Yes</b>	301	72
<b>No</b>	9	52

$$\chi^2 = 111.71, p = 0.0000, df = 1$$

## **DISCUSSION**

In India forty eight percent of currently married women were currently using some method of contraception in 1998-99. This level can be compared with 83 percent for China and 62 percent for Asia as a whole (Population Reference Bureau, 2000). In Tamil Nadu 52 % of currently married women were using some method of contraception as per the NFHS 2. In this study, the current use of contraceptive is seen in 59.7 % of the respondents which is higher than the state average in 1998.

Among the contraceptive users, it is found that the majority (52.5%) have undergone tubectomy, and OCP was least used (0.8%). This matches with the highest used method as per the NFHS-2. The reason for lesser usage of Oral pills has to be further investigated. Condom usage is seen among just 2.1 % of the total respondents, inspite of increased IEC activities. This could be because of the shift in usage of condoms more as a prevention for HIV rather as a contraceptive

Among the surveyed countries, level of unmet need, as a percentage of all married women of reproductive age range from 11% in Thailand and Turkey to 36 % in Kenya and 37 % in Rwanda <sup>44</sup>. India has the largest number of married women with unmet need in the world with about 15.8 % having an unmet need. The unmet need for contraception is 13% in Tamil Nadu. In this study, the unmet need for contraception is 23.8 %, which is higher than that of the national and state data in 1998. This shows that there is greater demand for Family Planning, which has to be targeted to achieve a higher contraceptive usage to decrease the Net reproduction rate to less than 1.

The overall awareness for any contraceptive is 83.4 % among the respondents. There is a significant difference between the contraceptive users and non users with the knowledge status.

Many studies indicate that lack of sufficient knowledge contribute to more than two thirds of all unmet need <sup>45</sup>. In this study also we find 42 women with unmet need attributed lack of knowledge as the reason, while 32 stated health reasons/ fear of side effects as reason. Lack of choice as a reason among 13 respondents has to be further investigated to identify their exact need.

Opposition from husband is also found to be a reason for unmet need. This shows the influence of decision making in the fertility of wives by husbands.

Nag noted that women may have unmet need for family planning because of high social cost of challenging the opposition from spouse or any one else in her social influence group.<sup>46</sup> Rama et al noted that in 12 % of mothers, the reason for unmet need was opposition from husband, families and communities.<sup>47</sup>

It is also found that a greater proportion of unmet need for spacing (67/73) is seen in the age group 20 – 29. In the age group 30 – 39, 12 respondents have an unmet need for limiting. There is significant difference between met and unmet need ( $p=0.000$ ) and also between the unmet need for spacing and limiting ( $p=0.01$ ) among the different age groups.

There is no significant difference among the met the unmet need with the age at marriage.

With regards to the number of living children in the family, unmet need for spacing is seen in the family with nil or one child whereas there is no unmet need for limiting within the family with less than 2 children, which points to the preference of family size of atleast 1. The difference between the met and unmet need within this different groups is significant statistically.

Even though none of the respondents stated the preference for male child as a reason for unmet need, observation of prevalence of met and unmet need among the families with atleast one male child and no male child, there seem to be significant difference( $p=0.0171$ ).

There is no significant difference among the different income groups and also among different level of school education



## **CHAPTER VII**

### **SUMMARY**

Recent programs have strategies, which focuses on meeting, rather than trying to change, people's needs and aspirations.

A descriptive cross sectional study among a sample of 520 currently married women of reproductive age group (15-49) of zone VIII (kodambakkam) of Chennai Corporation, chosen by simple random method.

A structured pre tested proforma, recommended for survey of family planning methods was used for the study, which included details on background characteristics, marital status and fertility, knowledge and attitude for contraception, perceived access and accessibility for contraceptives.

Contraceptive prevalence rate among the study population was 59.7 %. Among the users tubectomy was the commonest method with 88 % usage, while IUDs, condoms and OCPs were used in 7.1 %, 3.5 %, and 1.3 % respectively.

Knowledge of atleast one contraceptive was seen in 83.46 % of them with most of them knowing tubectomy instantaneously.

There were 6.3 % respondents, who had used any method of contraception in the past and currently not using any. Among them beside the reason to have a child (57.5 %), health reasons were seen in 39.3 % of them.

There were 34 % respondents who had never used a contraceptive. Within this group there were reasons of opposition from husband /family members in 7.3 %. Lack of knowledge and fear of side effect was seen in 42.93 % of them.

The unmet need for contraception was seen in 23.8 % of the total respondents giving a total need for family planning in the area as 83.5% (59.7 + 23.8) i.e. (contraceptive usage and unmet need)

Among the reasons for unmet need, lack of knowledge and health reason contributes to 60%. The other reasons that were found were Opposition from partner, lack of choice, low perceived risk and religious reasons. .

## **CHAPTER VIII**

### **RECOMMENDATIONS**

**In general, data on unmet need provide overall direction by helping to pin point the obstacles in society and weakness in services that need to be overcome. From this study I would like to make the following recommendations.**

**Women need to be counseled on the full range of available methods so that they can choose the method that best matches their individual circumstances and intentions and can change methods when they need to.**

**Women who are postpartum, breastfeeding, or approaching menopause need counseling on their likelihood of becoming pregnant and on the family planning methods that might be appropriate for them.**

**Women need correct information on contraceptive methods, especially on side effects and its management.**

**Programs should be planned so as to improve interpersonal relations between clients and providers and to ensure periodic follow- up of clients to reduce the number of women who stop using contraception.**

**Programs should focus on men as well as women, creating an environment in which both sexes can seek services and encouraging men to discuss family planning with their wives.**

## **CHAPTER IX**

### **LIMITATIONS**

1. Only three divisions of the zone VIII were selected.

## BIBLIOGRAPHY

1. Park. K. *Text book of Preventive and Social Medicine*, 18<sup>th</sup> ed. Jabalpur, India: Bhanot, 2005 p349 – 381.
2. Sinha .N.K, Family welfare, The state of India's Health, Voluntary Association of India, 1992: 191
3. Kishore .J, National Health programmes of India, 4th edition, p 263- 272.
4. International Institute for Population Sciences (IIPS) and ORC Macro. 2000. *National Family Health Survey (NFHS-2), 1998-99; India*. Mumbai: IIPS.
5. Health of the poor in Urban India, Report of consultation, July 25, 2002, New Delhi organized by World Bank, presentation on Tamil Nadu; State policy on Urban health. P 29
6. John A. Ross and William L. Winfrey, "Unmet Need for Contraception in the Developing World and the Former Soviet Union: An Updated Estimate," *International Family Planning Perspectives* 28, no. 3, 2002.
7. Carl Haub and Britt Herstad, *Family Planning Worldwide 2002 Data Sheet* (Washington, DC: Population Reference Bureau, 2002).

8. United Nations (UN), "Programme of Action of the International Conference on Population and Development," accessed online at [www.unfpa.org/icpd/reports&doc/](http://www.unfpa.org/icpd/reports&doc/) on July 2005.
9. UN General Assembly, "Key Actions for the Further Implementation of the Programme of Action of the International Conference on Population and Development," accessed online at [www.unfpa.org/icpd/reports&doc/215a1e.pdf](http://www.unfpa.org/icpd/reports&doc/215a1e.pdf) on July 2005.
10. Westoff, "Unmet Need at the End of the Century."
11. Westoff, "Unmet Need for Family Planning."
12. Jejeebhoy, S.J. 1990. Measuring contraceptive use-failure and continuation: An overview of new approaches. In *Measuring the Dynamics of Contraceptive Use: Proceedings of the United Nations Expert Group Meeting: 21-45. New York: United Nations.*
13. Jain, A.K. 1989. Fertility reduction and the quality of family planning services. *Studies in Family Planning*, 20(1): 1-16.
14. Ganatra, B. 2000. Abortion research in India: What we know, and what we need to know. In R. Ramasubban and S.J. Jejeebhoy, eds., *Women's Reproductive Health in India*: 186-235. Jaipur: Rawat Publications.

15. National Commission on Population. 2002. Report of the Working Group on Strategies to Address Unmet Needs. New Delhi: National Commission on Population.
16. Santhya, K.G. and S.J. Jejeebhoy. 2003. Sexual and reproductive health needs of married adolescent girls. *Economic and Political Weekly*, 38(41): 4370-4377.
17. Bhende, A.A. 1994. A study of sexuality of adolescent girls and boys in underprivileged groups in Bombay. *Indian Journal of Social Work*, 55: 557-571.
18. Kumar, R., A.Raizada, A.K. Aggarwal et al. 2000b. Adolescent behaviour regarding reproductive health. *Indian Journal of Paediatrics*, 67(12): 877-881.
19. Levine, R.E., H.E. Cross, S. Chhabra et al. 1992. Quality of health and family planning services in rural Uttar Pradesh: The clients' view. *Demography India*, 21(2): 247-266.
20. Roy, T.K., D.R. Devi, R.K. Verma et al. 1991. *Health Services and Family Planning in Rural Maharashtra: A Report of the Baseline Survey in Bhandara, Chandrapur, Dhule and Nagpur Districts*, Mumbai: IIPS.

21. Rajaretnam, T. and R.V. Deshpande. 1994. Factors inhibiting the use of reversible contraceptive methods in rural South India. *Studies in Family Planning*, 25(2): 111-121.
22. Acharya, R. and S. Surender. 1996. Inter-spouse communication, contraceptive use and family size: Relationship examined in Bihar and Tamil Nadu. *Journal of Family Welfare*, 42(4): 5-11.
23. Barua, A. and K. Kurz. 2001. Reproductive health-seeking by married adolescent girls in Maharashtra, India. *Reproductive Health Matters*, 9(17):53-62.
24. Dharmalingam, A. 1995. The social context of family planning in a south Indian village. *Inter-national Family Planning Perspectives*, 21(3): 98-103.
25. Gupta, V.M., R. Jain and P. Sen. 2001. Study of inter-spouse communication and adoption of family planning and immunization services in a rural block of Varanasi district. *Indian Journal of Public Health*, 45(4): 110-115.



26. Khan, M.E. and B. C. Patel. 1997. Male Involvement in Family Planning: A Knowledge Attitude Behaviour and Practice Survey of Agra *District*. New Delhi: Population Council.
27. Parveen, S., M.E. Khan, J.W. Townsend et al. 1995. Lesson Learned from a Community-Based Distribution Programme in Rural Bihar. New Delhi: Population Council.
28. Puri, C.P. 1998. Contraceptive research and development during the fifty years of independence in India: achievements and desired goal, *ICMR Bulletin*, 28(10): 89–102.
29. Ministry of Health and Family Welfare (MoHFW). 2002. *Guidelines for Administration of Emergency Contraceptive Pills by Medical Officers*. New Delhi: MoHFW, Government of India.
30. Jejeebhoy, S.J. and S. Kulkarni. 1996. Promoting contraceptive choices in the Indian programme: Women's perspectives. In M.E. Khan and G. Cernada, eds., *Spacing as an Alternative Strategy: India's Family Welfare Programme*: 31-52. New Delhi: B.R. Publishing Corporation

31. International Institute for Population Sciences (IIPS). 2001a. India Facility Survey (Under Reproductive and Child Health Project)- Phase I 1999, Mumbai: IIPS.
32. Indian Journal of Community medicine, Vol 29(3), July – September 2004. p139-140.
33. India and Family planning: An overview, accessed online at <http://w3.who.sea.org/fch> on November 2005.
34. Upadhyay, Jayantha; Sharma, Arun Kumar.; Fertility and Family Planning Acceptance among slum dwellers in Kanpur. *The Journal of Family planning*, June 1995. 41(2).p 61-68.
35. Omrana Pasha, Fariyal F. Fikree, Sten Vermund; Determinants of unmet need for Family Planning in Squatter settlements in Karachi, Pakistan. *Asia Pacific population journal*, June 2001, Vol 16, No 2. p 93- 108
36. Shah M A et al, Unmet need for contraception in Kuwait: issues for health care providers, *Journal of social science medicine*, 2004 Oct; 59 (8): 1573-1580.
37. Oye – Adeniran BA, Contraceptive prevalence among young women in Nigeria. *Journal of Obstetrics and Gynaecology*, 2005 Feb; 25(2): 182-5.

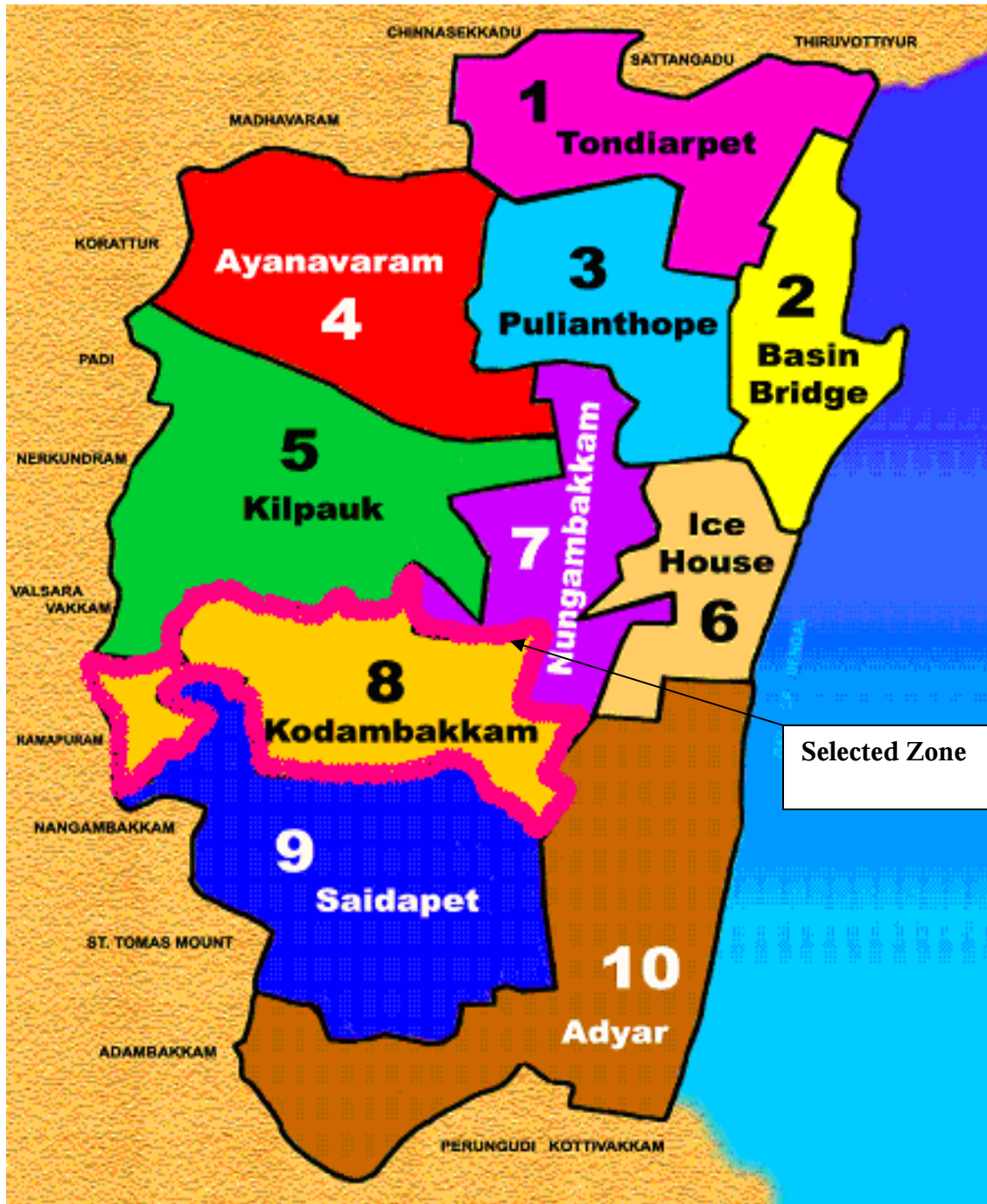
38. Qian X, Unintended pregnancy and induced abortion among unmarried women in China: a systematic review, *BMC health serv Res.* 2004 Jan 22;4 (1):1
39. Ritchers J. Sex in Australia: contraceptive practices among a representative sample of women. *Australian N Z Journal of Public Health.* 2003; 27(2):210-216
40. Madhumita Mukherjee, Kapilashrami .M.C, Kalaivan .K, Contraceptive practices in an urban slum of Delhi, 2004 submitted at Nihfw, unpublished.
41. Ravindran, T.K.S. 1993. Users' perspective on fertility regulation methods. *Economic and Political Weekly*, 13-20 November: 2508-12.
42. Dharmalingam, A. The social context of Family Planning in a south Indian Village. *International Family Planning Perspectives* 21(3): 98-103. Sep 1995.
43. Community based distribution of Contraception, WHO, Geneva: p112-119.
44. Population Reports. Meeting unmet need: New Strategies Series J Number 43. Family Planning Programs, June 1997.

45. Ross JA, Barkat A, San BP and Visaria L. Unmet need: Prototype Action Programs for Bangladesh, India, Vietnam. Presented at the annual meeting of Population Association of America, New Orleans May 9-11, 1996.
46. Nag M. Some cultural factors affecting cost of fertility regulation. Population bulletin of the United Nations 1984; 17- 38.
47. Rama R, Ghosh MN, Bhattacharya, Halder A, Chatterjee C, Naskar N, Study of unmet need for family planning among married women of reproductive age attending immunization clinic in a medical institution of Calcutta. Indian Journal of Community Medicine 2000; 225.
48. Christopher Murray and Alan Lopez, eds., *Health Dimensions of Sex and Reproduction*. Vol. 3, *Global Burden of Disease*. Boston: Harvard University Press, 1998: 280
49. John B. Casterline and Steven W. Sinding, "Unmet Need for Family Planning in Developing Countries and Implications for Population Policy," *Population and Development Review* 26, no. 4 (2000): 691-723.

# ANNEXURES

## ANNEXURE IA

## CHENNAI CITY – ZONE MAP



## **ANNEXURE IB**

### **1.1 LIST OF ZONES IN CHENNAI CORPORATION.**

1. Tondiarpet
2. Basin bridge
3. Pulianthope
4. Ayanavaram
5. Kilpauk
6. Ice house
7. Nungambakkam
8. Kodambakkam
9. Saidapet
10. Adayar

### **1.2 DIVISIONS IN ZONE VIII**

#### **ZONE – VIII (Kodambakkam)**

1. Sathiamoorthi Nagar
2. Alwarpet (North)
3. Alwarpet (South)
4. Vadapalani (West)

5. Vadapalani (East)
6. Kalaivanar Nagar
7. Navalar Nedunchezian Nagar (East)
8. Navalar Nedunchezian Nagar (West)
9. Ashok Nagar
- 10.MGR Nagar
- 11.Kamaraj Nagar (North)
- 12.Kamaraj Nagar (South)
- 13.Thiagaraya Nagar
- 14.Rajaji Nagar
- 15.Virugambakkam (South)
- 16.Saligramam



## **ANNEXURE IC**

### **LIST OF SLUMS IN SELECTED DIVISIONS.**

#### **Division- Alwarpet (North)**

1. Eldam Saalai.
2. Ramalingeswarar koil street area.
3. Kamarajar Saalai.
4. Thiruvalluvar Road
5. Appadurai Street
6. Raju thottam
7. Seethamma colony
8. Kavingar Bharathidasan Saalai
9. Bharathiyar street.
- 10.V.O.C street
- 11.Venkatraman street
- 12.Jegannathar thottam
- 13.Kannapa thottam
- 14.Barau nagar
15. Cenotaph road

16.Karimedu

17. Sakili palayam

Division – **Alwarpet (South)**

1. Mambalam tank area

2. Venkatanarayana Road

3. Jogipalayam slum

4. Satyamoorthy nagar

5. Ganesapuram ratna nagar

6. Cenotaph road

7. Kamakshi nagar

8. TTK road

9. Sriram nagar

10.Austin nagar

11.Pycropts nagar

12.Chamiers Road

13.Adyar club gate road

14.Archibishop mathia avenue crescent st

15. Nandanam

**Division- Thyagarayar nagar**

1. Raju pillai thottam
2. Duraisamy road
3. Somasundaram street
4. Muthu reddy thottam
5. Vyasa rao street
6. Ragavaiah street
7. Sir thayarayar road
8. Raja mannar street
9. Prakasam saalai
10. Venkatramaiar street
11. Jagathambal street
12. Nageswara rao street
13. Lakshmi narasimhan street
14. Dhanakotti ammal thottam
15. Lodhi khan street
16. Sivagnanam street

## ANNEXURE II

### QUESTIONNAIRE FOR COMMUNITY SURVEY OF FERTILITY AND USE OF FAMILY PLANNING METHODS AMONG REPRODUCTIVE AGE (15 – 49 YEARS)

Name: \_\_\_\_\_ Age: \_\_\_\_\_ No: \_\_\_\_\_

Name of spouse: \_\_\_\_\_

Address/Slum: \_\_\_\_\_

#### Introduction

“How do you do? I am (name) \_\_\_\_\_ of (name of organization). I am conducting a survey on the need for family planning services in your community. I have several questions to ask you. I know you are very busy. But it will not take very long. And I would appreciate it very much if you would help us by answering these questions.

I assure you that your answers will be kept confidential and used solely for research purposes.

First I would like to know how many people are living in this household, then we will move on to several other questions.”

#### **A. Background characteristics of respondent**

A1. In what month and year were you born? MM \_\_\_\_, YY \_\_\_\_\_

A2. How old were you on your last birthday? \_\_\_\_ Years.

A3. Have you ever attended school? Yes \_\_\_\_, No \_\_\_\_

If yes, Primary (1-5) , Middle (6-8) , High (9 –10), Secondary( 11-12),College.

Can you read a letter or newspaper easily , with difficulty or not at all ? \_\_\_\_

A4. What is the average monthly income of your family? \_\_\_\_\_

#### **B. Marital status and fertility**

B1. What is your current marital status?

Single, Married, Divorced, Widowed, Separated. \_\_\_\_\_

B2. At what age did you get married?

B3. Have you ever been pregnant? Yes \_\_\_\_, No \_\_\_\_ ( →C1)

B4. How many children you have given birth to, including those who have survived only briefly?  
\_\_\_\_\_ No. of sons: \_\_\_\_\_

B5. When was your last child born? \_\_\_\_\_ or age \_\_\_\_\_

B6. Did you breast-feed your last child at all? Yes \_\_, No \_\_, ( → B8 )

B7. Are you still breast-feeding? Yes \_\_, No \_\_, Child died \_\_

B8. Have your periods returned? Yes \_\_, No \_\_ .

B9. Have you had a period in the last four weeks? Yes \_\_, ( → C4), No \_\_

B10. Are you pregnant now? Yes \_\_, No \_\_

B11. Judging from your partners and your physical condition can you become pregnant whatever you want to? Yes \_\_, No \_\_, Not sure

If no or not sure, why? Partner has been sterilized \_\_, respondent sterilized \_\_,  
Other reason (specify) \_\_\_\_\_

B12. Do you want to have (more) children? Yes \_\_ (1), No \_\_ (2) , Not sure (3)  
If yes, how long do you want to wait before having the next child? \_\_ Months

### **C. Knowledge and attitude to contraception and use of contraceptives.**

C1. Do you know about any methods that are used to prevent women from getting pregnant too often or having more children than they want? (Interviewer: do not suggest any methods)  
Yes \_\_ , No \_\_ (→ D8)

C2. What methods do you know about? (Note down any methods mentioned in column1 of **table 1**)

C3. Have you ever used any of the methods we have talked about? Yes \_\_ No \_\_ (→ C7)

C4. Are you currently using any method? Yes \_\_, No \_\_

Table 1. Record the knowledge and history of use of contraception.

Method	Knowledge of method ( C2)	History of use (C3 )	Preferred method (C9)
Condom			
Oral contraceptive pill			
Injectables			
IUDs			
Tubal ligation			

Vasectomy			
Rhythm (safe period)			
Withdrawal			
Induced abortion or menstrual regulation			
Avoidance of sexual intercourse			
Others (specify)			

C5. If yes, which method?

C6.If no, what was the main reason you stopped using it?

1. To become pregnant
2. Method failed/ got pregnant
3. Infrequent sex
4. Partner disapproved
5. Health Concerns
6. Method not available
7. Inconvenience
8. Others (specify) Husband away, lack of privacy
9. Don't know.

Check Q B10 and C4 if either partner is sterilized or currently using any method ( → D1)

C7. What are the main reasons that you are not using a method to avoid pregnancy?

1. Want to become pregnant
2. Infrequent sex
3. Postpartum/ breast-feeding
4. Menopause/sub fecund
5. Lack of knowledge
6. Difficult access to methods
7. Religious beliefs.
8. Opposition from partner
9. Fear of side effects
10. Opposed to family planning
11. Others (specify)
12. Don't know

C8.Do you intend to use another method to avoid pregnancy at any time in future?

Yes \_\_, No \_\_ ( → D1) Don't know ( → D1 )

C9. Which method would you prefer to use? (Table1 column 3)

C10. Do you intend to use that method in next 12 months? Yes \_\_, No \_\_\_\_, Don't know

C11. What is the main reason do you think you will not use a family planning method at any time in future?

1. Infrequent sex/ no sex
2. Menopausal /hysterectomy
3. In fecund /sub fecund
4. Want as many children
5. Husband opposed
6. Others opposed
7. Lack of knowledge
8. Side effects
9. Cost
10. Difficult to get
11. Afraid of sterilization
12. Others

**D. Perceived availability and accessibility of sources of contraceptives**

D1. Do you know where to get contraceptive supplies?

Yes \_\_\_\_, No \_\_\_\_,

D2. What is that?

1. Health center
2. Pharmacy
3. Traditional healer
4. Private physician
5. Other

D3. Which place would you prefer to go? (Note the first place mentioned)

D4. Is the cost reasonable? Yes \_\_\_\_ . No \_\_\_\_

D5. What are all the methods available there?

Condom

Oral contraceptive pill

IUDs

Tubal ligation

Vasectomy

Induced abortion or menstrual regulation

Others (specify)

D6. Is the place convenient? Yes \_\_\_\_ . No \_\_\_\_

**E. Concluding the interview**

“Thank you very much. You have been helpful. Is there any thing you would to add?”